Proposed Modifications to Zero Emission Vehicle Regulation

Public Workshop

July 14, 2014

Send us your Comments

Email us at:

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Agenda

- Background
- Intermediate Volume Manufacturer (IVM) Proposed Modifications
- Other Regulatory Cleanup
- Rulemaking Timeline

Background

- ZEV Regulation for air quality and climate change goals
- Advanced Clean Cars Regulations adopted in January 2012
- Additional conforming changes adopted in October 2013
- Additional compliance flexibility for IVMs requested; addressed in this rulemaking

Purpose of these Amendments

- Modify IVM definition to better reflect research and development and product introduction capabilities
- Modify IVM ZEV requirement resulting in percent of sales more closely in line with LVMs
- Provide clarity where needed within regulatory language

IVM 5

- Jaguar Land Rover, Mazda, Mitsubishi, Subaru, and Volvo
- Asking for changes in the requirements for OEMs of their size
- Some crossing the LVM 20,000 vehicle annual sales threshold before 2018
- Advanced product planning underway

IVM 5 Proposal: October 2013

- Very small demo quantities of ZEVs through 2025
- Large credit multipliers for any ZEVs produced
- Travel and pooling for ZEVs and TZEVs in ZEV states
- Extended Service Credits (extra credits for cars offered for sale or extended leases)
- 3 year credit deficit make-up period

Issues Addressed in Proposal

- Volume Threshold for LVM definition
- Lead time for compliance
- Overall obligation
- S177 State Compliance considerations

Overview of Proposed IVM Regulatory Modifications

- 2 part Large Volume Manufacturer (LVM) Definition
- Additional Lead Time
- Lower Percent ZEV Requirement
- Section 177 State Pooling

Modified LVM Definition

- Maintain current California sales threshold of 20,000 vehicles on average over 3 years
- Add second test: 3 year average global revenue exceeds $40B
- Sunset global revenue test in 2020 resulting in OEMs with sales >20,000 producing ZEVs by 2025

2012 Sales / Revenue, Selected OEMs

OEM	California Sales[1]	Global Sales[1]	Global Revenue[2] (billions)
JLR	**7,246**	**413,752**	**$23.9**
Mazda	**34,111**	**1,095,056**	**$23.4**
Mitsubishi	**8,053**	**554,406**	**$19.2**
Subaru	**21,184**	**369,601**	**$20.3**
Volvo	**8,269**	**421,951**	**$19.1**
BMW	57,983	1,367,617	$101.6
Daimler	57,904	1,118,817	$81.6
Hyundai	113,967	4,945,704	$81.4
Kia	47,695	2,709,000	$45.5

Notes:
1. Sales data compiled from Ward's Auto & ARB (Kia data from 2013 Business Results)
2. Global revenue compiled from OEM financial statements. Converted to USD based on exchange rate the last day of OEM fiscal years.

Propose Extending Lead Time

Extend lead time to five 3-year averages in excess of the 20,000 vehicle sales and global revenue threshold

- Provides 5 to 7 years of lead time
- Example: Acme Motors has sales of 14k, 19K and 31K in 2015, 2016 and 2017 respectively. Their 3-year average is over 20k; if the next four 3-year averages also exceed 20k, Acme Motors must comply as an LVM in 2022 (5 year lead time)

2015	2016	2017	2018	2019	2020	2021	2022	2023
First 3 year average exceeding 20k								
	2nd 3 year average exceeding 20k							
		3rd 3 year average exceeding 20k						
			4th 3 year average exceeding 20k					
				5th 3 year average exceeding 20k				
							1st year LVM	

Reduced Percentage ZEV Requirement

Adjustment to total ZEV credit obligation

- Using ZEV and TZEV technology splits for LVM
- IVMs may meet entire ZEV obligation with TZEV credits
- Total ZEV credit obligation = Part of the reg that can be met with TZEV + 1/5 of obligation that must be met with ZEVs
- Results in more closely aligned percent of new car sales subject to ZEV reg for both IVMs and LVMs

Percent ZEV Credit Requirement

	2018	2019	2020	2021	2022	2023	2024	2025
ZEV minimum	2	4	6	8	10	12	14	16
TZEV maximum	2.5	3	3.5	4	4.5	5	5.5	6
Total	4.5	7	9.5	12	14.5	7	19.5	22
TZEV + 1/5 ZEV	2.9	3.8	4.7	5.6	6.5	7.4	8.3	9.2

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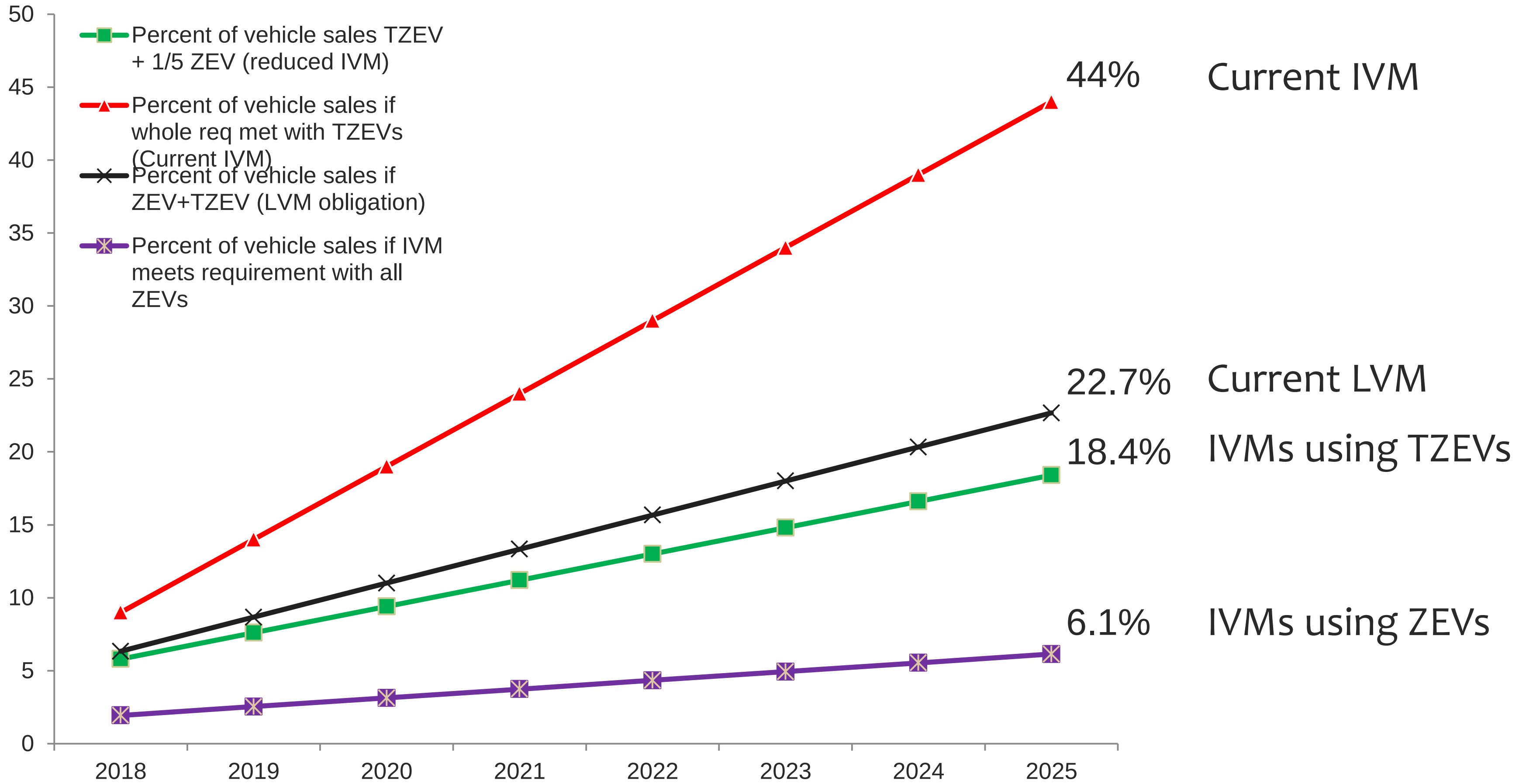
Likely Compliance Scenario Percent of Sales



Pooling – Existing Requirements

OEMs must deliver ZEVs to 177 states prior to 2018 to earn the flexibility to pool compliance in ZEV states and to earn a reduced TZEV requirement

- 0.75% two years prior to 2018 (2016)
- 1.50% one year prior to 2018 (2017)

Pooling – IVM Revisions

- Additional flexibility for IVMs, not required to deliver ZEVs in 2016-2017
- ZEV placement before start of LVM requirements
  - 0.75% ZEVs two years prior
  - 1.50% ZEVs one year prior
  - Allow 2 additional years to deliver ZEVs
- No Reduced TZEVs

Additional Provisions Suggested by Stakeholders

- 3 year carry back[1]
- ARB needs to better understand why this is needed

[1]carry back refers to providing additional years to make up a compliance deficit. The regulation currently allows 1 year carry back.

Additional Provisions Suggested by Stakeholders

- PZEV Credit conversion rate[2]
  - Too many credits generated
  - Already extensive process to develop existing rate

[2] In 2018 PZEV credits are converted to T-ZEV credits using a conversion factor. IVM PZEV credits are discounted by 75% and LVM PZEV credits are discounted by 93.25%.

Additional Regulatory Cleanup

- Fast Refueling Language

  clarify that the 12 month period in question begins with vehicle placement

- Minor conforming and grammar corrections throughout

Process Timeline

- Stakeholder meetings continue
- ISOR released: September 2, 2014
- Board Hearing: October 23 & 24, 2014

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Acronyms

- **ARB**: Air Resources Board
- **IVM:** Intermediate Volume Manufacturer
- **LVM:** Large Volume Manufacturer
- **MY**: Model Year
- **OEM:** Original Equipment Manufacturer
- **PZEV:** Partial Zero Emission Vehicle
- **TZEV:** Transitional Zero Emission Vehicle
- **S177**: Section 177 of the Clean Air Act
- **ZEV:** Zero Emission Vehicle